



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

F

789
H63

A 845,621

307

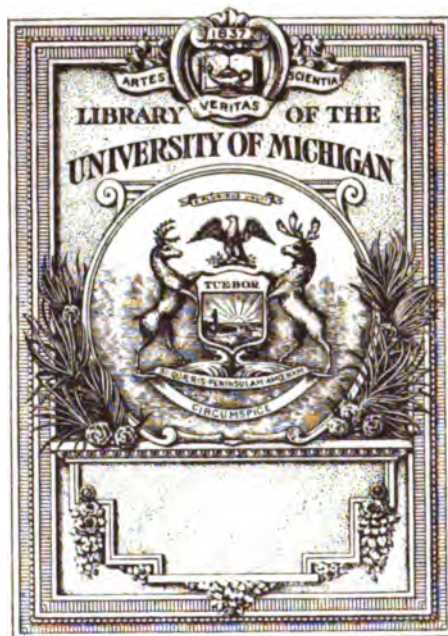
·GRAND CAÑON·

OF THE



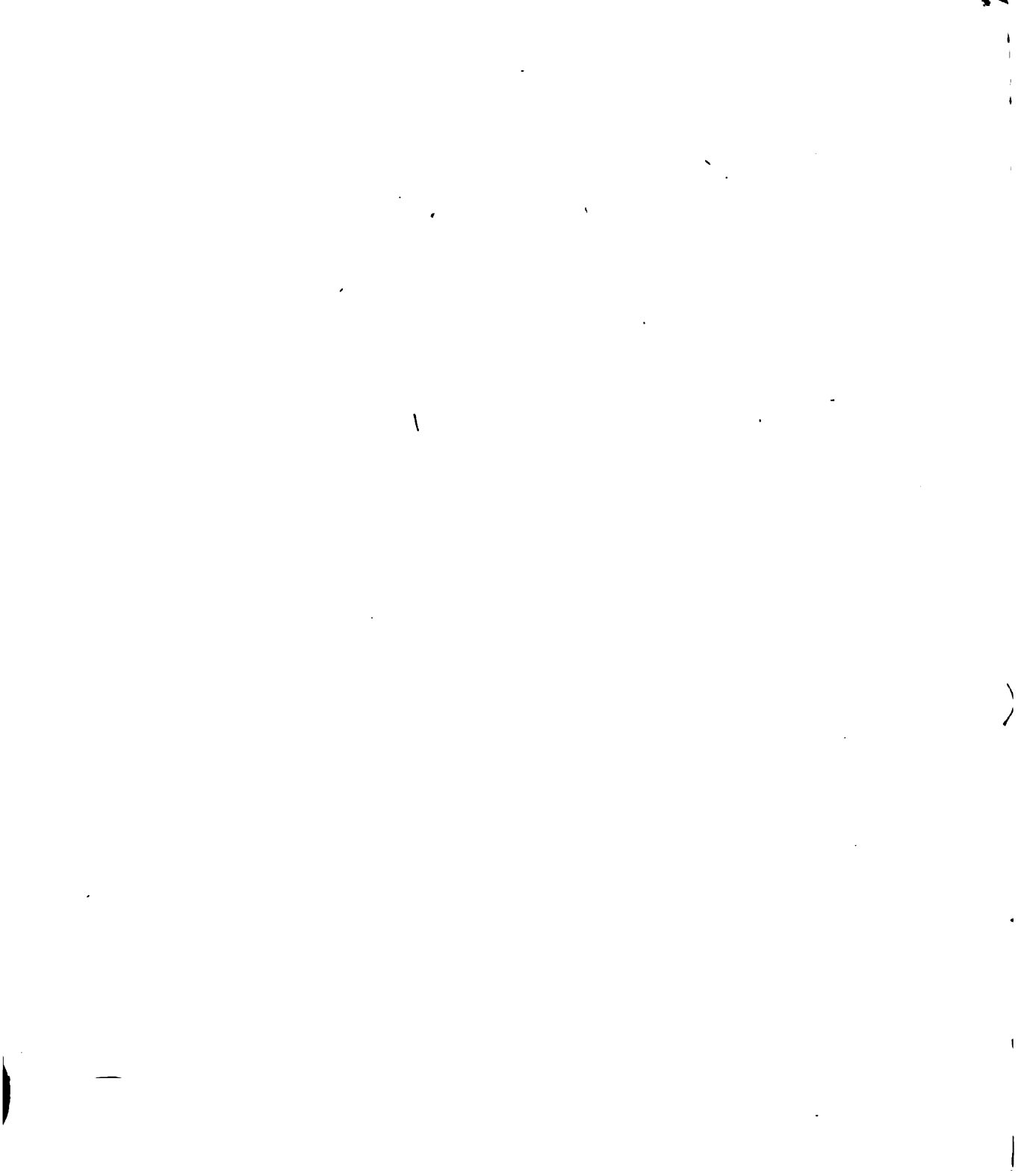
·COLORADO·RIVER·

·ARIZONA·



THE GIFT OF
Prof. Geo. Hempl

F
788
H63





From Painting by Thomas Moran.

GRAND CANON OF THE COLORADO RIVER.

GRAND CAÑON 309
OF THE
COLORADO RIVER,
ARIZONA.

BY
C. A. HIGGINS.

WITH ORIGINAL ILLUSTRATIONS BY THOMAS MORAN, H. F. FARNY AND
F. H. LUNGREN.

PASSENGER DEPARTMENT, SANTA FE ROUTE.

CHICAGO, 1897.



I.

THE Colorado is one of the great rivers of North America. Formed in southern Utah by the confluence of the Green and Grand, it intersects the northwestern corner of Arizona, and, becoming the eastern boundary of Nevada and California, flows southward until it reaches tidewater in the Gulf of California, Mexico. It drains a territory of 300,000 square miles, and, traced back to the rise of its principal source, is 2,000 miles long. At two points, the Needles and Yuma on the California boundary, it is crossed by a railroad. Elsewhere its course lies far from Caucasian settlements and far from the routes of common travel, in the heart of a vast region fenced on the one hand by arid plains and on the other by formidable mountains. The early Spanish explorers first reported it to the civilized world in 1540, two separate expeditions becoming acquainted with the river for a comparatively short distance above its mouth, and another, journeying from the Moqui Pueblos northwestward across the desert, obtaining the first view of the Big Cañon, failing in every effort to descend the cañon wall, and spying the river only from afar. Again, in 1776, a Spanish priest traveling southward through Utah struck off from the Virgen River to the southeast and found a practicable crossing at a point that still bears the name "Vado de los Padres." For more than eighty years thereafter the Big Cañon remained unvisited, except by the Indian, the Mormon herdsman and the trapper, although the Sitgreaves expedition of 1851, journeying westward, struck the Colorado about one hundred and fifty miles above Yuma, and Lieutenant Whipple in 1854 made a survey for a practicable railroad route along the thirty-fifth parallel, where the Atlantic and Pacific Railroad has since been constructed. The establishment of military posts in New Mexico and Utah having made desirable the use of a water-way for the cheap transportation of supplies, in 1857 the War Department dispatched an expedition in charge of Lieutenant Ives to explore the Colorado as far from its mouth as navigation should be found practicable. Ives ascended the river in a specially constructed steamboat to the head of Black Cañon, a few miles below the confluence of the Virgen River in Nevada, where further navigation became impossible; then, returning to the Needles, he set off across the country toward the northeast. He reached the Big Cañon at Diamond Creek and at Cataract Creek in the spring of 1858, and from the latter point made a wide southward detour around the San Francisco peaks, thence northeastward to the Moqui Pueblos, thence eastward to Fort Defiance and so back to civilization.

That is the history of the explorations of the Colorado up to twenty-five years ago. Its exact course was unknown for many hundred miles, even its origin in the junction of the Grand and Green Rivers being a matter of conjecture, it being difficult to approach within a distance of two or three miles from the channel, while descent to the river's edge could be hazarded only at wide intervals, inasmuch as it lay in an appalling fissure at the foot of seemingly impassable cliff terraces that led down from the bordering plateau; and an attempt at its navigation would have been courting death. It was known in a general way that the

entire channel between Nevada and Utah was of the same titanic character, reaching its culmination nearly midway in its course through Arizona. In 1869 Maj. J. W. Powell undertook the exploration of the river with nine men and four boats, starting from Green River City, on the Green River, in Utah. The project met with the most urgent remonstrance from those who were best acquainted with the region, including the Indians, who maintained that boats could not possibly live in any one of a score of rapids and falls known to them, to say nothing of the vast unknown stretches in which at any moment a Niagara might be disclosed. It was also currently believed that for hundreds of miles the river disappeared wholly beneath the surface of the earth. Powell launched his flotilla on May 24, and on August 30 landed at the mouth of the Virgin River, more than one thousand miles by the river channel from the place of starting, minus two boats and four men. One of the men had left the expedition by way of an Indian reservation agency before reaching Arizona, and three, after holding out against unprecedented terrors for many weeks, had finally become daunted, choosing to encounter the perils of an unknown desert rather than to brave any longer the frightful menaces of that Stygian torrent. These three, unfortunately making their appearance on the plateau at a time when a recent depredation was colorably chargeable upon them, were killed by Indians, their story of having come thus far down the river in boats being wholly discredited by their captors. Powell's journal of the trip is a fascinating tale, written in a compact and modest style, which, in spite of its reticence, tells an epic story of purest heroism. It definitely established the scene of his exploration as the most wonderful geological and spectacular phenomenon known to mankind, and justified the name which had been bestowed upon it—THE GRAND CAÑON—sublimest of gorges; Titan of chasms. Many scientists have since visited it, and, in the aggregate, a considerable number of unprofessional lovers of nature; but until a few years ago no adequate facilities were provided for the general sightseer, and the world's most stupendous panorama was known principally through report, by reason of the discomforts and difficulties of the trip, which deterred all except the most indefatigable enthusiasts. Even its geographical location has been the subject of widespread misapprehension. As stated by Captain Dutton, in his admirable "Tertiary History of the Grand Cañon District," its title has been pirated for application to relatively insignificant cañons in distant parts of the country, and thousands of tourists have been led to believe that they were viewing the Grand Cañon when, in fact, they looked upon a totally different scene, between which and the real Grand Cañon there is no more comparison "than there is between the Alleghanies or Trosachs and the Himalayas."

There is but one Grand Cañon. Nowhere in the world has its like been found.

II.

IT lies wholly in the northern part of Arizona. It is accessible from the north only at the cost of weeks of arduous travel, necessitating a special expedition with camp outfit and pack animals. From the south it is easily reached in a single day's journey by stage from the town of Flagstaff, an important station on the Atlantic and Pacific Railroad, which is a division of the Santa Fe Route. There is no other railroad within a distance of several hundred miles.

In 1892 a tri-weekly stage line was permanently established between Flagstaff and the Grand Cañon. The entire distance is sixty-five miles, and it is covered in eleven hours, by the aid of three relays. The route is nearly level, traversing the plateau district which, taking name from the river, is known as the Colorado Plateau. The excellence of the roadway needs



SAN FRANCISCO MOUNTAIN.

Drawn by Thomas Moran.

no other testimony than the fact that the journey consumes so little time. For long stretches it is as hard and smooth as a boulevard. The stage leaves Flagstaff in the morning, reaches a comfortable dinner station at noon, and deposits its passengers at a permanent camp on the rim of the most impressive portion of the Cañon before nightfall. The Cañon camp is a tiny tent village, picturesquely located in a park of tall pines. Each tent is floored, and furnished with bed, table, chairs and other articles of comfort. Excellent meals are provided. Elevated more than 7,000 feet above sea-level, the air is pure and exhilarating, and the health-giving climate that is characteristic of the region, together with the charming environment of the pine forest, would make a week's stay at the Cañon camp a delightful and profitable outing, even were there no Grand Cañon at hand.

The stage returns from the Cañon to Flagstaff every other day. If it is necessary to be satisfied with a few hours' inspection, one may return the following morning after arrival, and thus see the Grand Cañon in but two days' absence from Flagstaff. While so superficial a view will reveal only a fraction of its protean splendors, it will prove an everlasting memory.



Drawn by Thomas Moran.

MIDWAY STATION AT CEDAR RANCH.

III.

THE journey to the Cañon is greatly diversified in interest. Plunging at once into one of the parks that are peculiar to Arizona—forests of pine free from undergrowth, streaked with sunlight and seductively carpeted with grass—the road crosses a flank of the splendid San Francisco peaks, descending to level stretches where prairie dogs abound, again winding through rocky defiles, on past volcanic vent-holes in whose subterranean recesses the Cave Dwellers made their primitive home and where the hill slopes are thickly strewn with fragments of pottery; past bare mountains of black cinder striped with red slag; over broad ranges where sheep and cattle browse and the tents of the herders gleam from the hillside where the infrequent spring pours out its flow; threading the notches of slopes regularly set with cedar and piñon; across gentle divides from whose summits the faint rosy hues of the Painted Desert may be seen in the northeast, and in the north the black jagged lines of mountain ranges indefinitely far away; then once more into the pines and down a short, steep descent to the terminus in a romantic glen near John Hance's cabin, some fifteen miles west of the confluence of the Little Colorado with the main river.

In all the journey nothing has been encountered that could prepare the mind for transcendent scenery, save that in the last half mile two or three glimpses of what were guessed to be pinkish cliffs far to right and left were shadowed faintly through the trees. And certainly there is nothing that portends the heroic in the sylvan scene where at last the traveler quits the stage. Small herbage and flowers of every hue grow at the foot of the pines, among pretty rock fragments of variegated color. Save for a single crag, whose gray crest barely tops the northward slope of the glen, a hundred yards away, there is no hint of any presence foreign to the peaceful air of a woodland glade, denized by birds and squirrels, innocent even of the rumor of such a thing as the Grand Cañon. The visitor, smitten with a sudden fear of bitter disappointment in store, strides eagerly up the slope to put the vaunted Cañon to the test. Without an instant's warning he finds himself upon the verge of an unearthly spectacle that stretches beneath his feet to the far horizon. Stolid indeed is he if he can front that awful scene without quaking knee or tremulous breath.

IV.

An inferno, swathed in soft celestial fires; a whole chaotic under-world, just emptied of primeval floods and waiting for a new creative word; a boding, terrible thing, unflinchingly real, yet spectral as a dream, eluding all sense of perspective or dimension, outstretching the faculty of measurement, overlapping the confines of definite apprehension. The beholder is at first unimpressed by any detail; he is overwhelmed by the *ensemble* of a stupendous panorama, a thousand square miles in extent, that lies wholly beneath the eye, as if he stood upon a mountain peak instead of the level brink of a fearful chasm in the plateau whose opposite shore is thirteen miles away. A labyrinth of huge architectural forms, endlessly varied in design, fretted with ornamental devices, festooned with lace-like webs formed of talus from the upper cliffs and painted with every color known to the palette in pure transparent tones of marvelous delicacy. Never was picture more harmonious, never flower more exquisitely beautiful. It flashes instant communication of all that architecture and painting and music for a thousand years have gropingly striven to express. It is the soul of Michael Angelo and of Beethoven.

A cañon, truly, but not after the accepted type. An intricate system of cañons, rather, each subordinate to the river channel in the midst, which in its turn is subordinate to the total effect. That river channel, the profoundest depth, and actually more than six thousand feet below the point of view, is in seeming a rather insignificant trench, attracting the eye more by reason of its somber tone and mysterious suggestion than by any appreciable characteristic of a chasm. It is nearly five miles distant in a straight line, and its uppermost rims are 3,000 feet beneath the observer, whose measuring capacity is entirely inadequate to the demand made by such magnitudes. One cannot believe the distance to be more than a mile as the crow flies, before descending the wall or attempting some other form of actual measurement. Mere brain knowledge counts for little against the illusion under which the organ of vision is here doomed to labor. That red cliff upon your right, darkening from white to gray, yellow and brown as your glance descends, is taller than the Washington monument. The Auditorium in Chicago would not cover one-half its perpendicular span. Yet it does not greatly impress you. You idly toss a pebble toward it, and are surprised to note how far the missile falls short. Subsequently you learn that the cliff is a good half mile distant. If you care for an abiding sense of its true proportions, go over to the trail that begins beside its summit and clamber down to its base and back. You will return some hours later, and with a decided respect for a small Grand Cañon cliff. Relatively it is insignificant; in that sense your first estimate



Drawn by Thomas Moran.

HEAD OF THE OLD HANCE TRAIL.

was correct. Were Vulcan to cast it bodily into the chasm directly beneath your feet, it would pass for a boulder, if indeed it were discoverable to the unaided eye. Yet the immediate chasm itself is only the first step of a long terrace that leads down to the innermost gorge and the river. Roll a heavy stone to the rim and let it go. It falls sheer the height of a church or an Eiffel Tower, according to your position, and explodes like a bomb on a projecting ledge. If, happily, any considerable fragments remain, they bound onward like elastic balls, leaping in wild parabola from point to point, snapping trees like straws, bursting, crashing, thundering down until they make a last plunge over the brink of a void, and then there comes languidly up the cliff sides a faint, distant roar, and your boulder that had withstood the buffets of centuries lies scattered as wide as Wycliffe's ashes, although the final fragment has lodged only a little way, so to speak, below the rim. Such performances are frequently given in these amphitheatres without human aid, by the mere undermining of the rain, or perhaps it is here that Sisyphus rehearses his unending task. Often in the silence of night a tremendous fragment may be heard crashing from terrace to terrace like shocks of thunder peal.

The spectacle is so symmetrical, and so completely excludes the outside world and its accustomed standards, it is with difficulty one can acquire any notion of its immensity. Were it half as deep, half as broad, it would be no less bewildering, so utterly does it baffle human grasp. Something may be gleaned from the

account given by geologists. What is known to them as the Grand Cañon District lies principally in northwestern Arizona, its length from northwest to southeast in a straight line being about 180 miles, its width 125 miles, and its total area some 15,000 square miles. Its northerly beginning, at the high plateaus in southern Utah, is a series of terraces, many miles broad, dropping like a stairway step by step to successively lower geological formations, until in Arizona the platform is reached which borders the real chasm and extends southward beyond far into the central part of that territory. It is the theory of geologists that 10,000 feet of strata have been swept by erosion from the surface of this entire platform, whose present uppermost



Drawn by H. F. Farny.

THE STAGE TERMINUS.

formation is the Carboniferous; the deduction being based upon the fact that the missing Permian, Mesozoic and Tertiary formations, which belong above this Carboniferous in the series, are found in their place at the beginning of the northern terraces referred to. The theory is fortified by many evidences supplied by examination of the district, where, more than anywhere else, mother earth has laid bare the secrets of her girlhood. The climax in this extraordinary example of erosion is, of course, the chasm of the Grand Cañon proper, which, were the missing strata restored to the adjacent plateau, would be 16,000 feet deep. The layman is apt to stigmatize such an assertion as a vagary of theorists, and until the argument has been heard it does seem incredible that water should have carved such a trough in solid rock. It is easier for the imagination to conceive it as a work of violence, a sudden rending of earth's crust in some huge volcanic fury; but it appears to be true that the whole region was repeatedly lifted and submerged, both under the ocean and under a fresh-water sea, and that during the period of the last upheaval the river cut its gorge. Existing as the drainage system of a vast territory, it had the right of way, and as the plateau deliberately rose before the pressure of the internal forces, slowly, as grind the mills of the gods, through a period to be measured by thousands of centuries, the river kept its bed worn down to the level of erosion; sawed its channel free, as the saw cuts the log that is thrust against it. Tributaries, traceable now only by dry lateral gorges, and the gradual but no less effective process of weathering, did the rest.

Beginning on the plateau level on the Cañon's brink, the order of the rock formations above the river, according to Captain Dutton, is as follows:

- | | |
|--|---|
| 1. Cherty limestone, 240 feet. | 6. Red Wall limestone, 1,500 feet. |
| 2. Upper Aubrey limestone, 320 feet. | 7. Lower Carboniferous sandstone, 550 feet. |
| 3. Cross-bedded sandstone, 390 feet. | 8. Quartzite base of Carboniferous, 180 feet. |
| 4. Lower Aubrey sandstone, 950 feet. | 9. Archaean. |
| 5. Upper Red Wall sandstone, 400 feet. | |

The total vertical depth is more than a mile.

V.

ONLY by descending into the Cañon may one arrive at anything like comprehension of its proportions, and the descent cannot be too urgently commended to every visitor who is sufficiently robust to bear a reasonable amount of fatigue. But few practicable paths down the Cañon wall exist throughout its entire length. One of these, the old Hance trail, begins within half a mile of the stage terminus. The new trail is distant only half a mile farther; and three miles away is the Cameron trail. The location of the Cañon camp thus affords magnificent views from the rim and convenient ways of access to the Cañon depths and the river. The first mentioned trail has been practically superseded; the others may be traversed nearly all the way on horseback in safety; but the following notes of a descent of the old Hance trail when there was no other may serve to indicate the nature of such an experience before its asperities were softened:

"For the first two miles it is a sort of Jacob's ladder, zigzagging at an unrelenting pitch down a steep and nearly uniform decline caused by a sliding geological fault and centuries of frost and rain. At the end of two miles a comparatively gentle slope is reached, known as the First Level, some 2,500 feet below the rim; that is to say—for such figures have to be impressed objectively upon the mind—five times the height of St. Peter's, the Pyramid of Cheops, or the Strasburg Cathedral; eight times the height of the Bartholdi Statue of Liberty; eleven



Drawn by Thomas Moran.

LOOKING UP THE TRAIL.

times the height of Bunker Hill Monument. Looking back from this level the huge picturesque towers that border the rim shrink to pigmies and seem to crown a perpendicular wall, unattainably far in the sky. Yet less than one-half the descent has been made, and less than one-third the entire distance of the trail to the river accomplished. Hance's Rock Cabin lies only a short distance ahead, where dinner and rest are to be had under the shade of cottonwoods by the side of a living spring. Farther on, the trail continues down a widening gorge plentifully set with shrubs and spangled, in season, with the bloom of the yucca, prickly pear, primrose, marigold and a score of unfamiliar showy flowers, white, blue, red and yellow, surprisingly fresh and vigorous above a dry, red, stony soil. Small lizards dart across the path—brown lizards, spotted lizards, striped lizards, lizards with tails of peacock blue—and an occasional horned toad scrambles out of the way. No other reptile is encountered. Soon the course of a clear rivulet is reached, whose windings are followed to the end. The red wall limestone gives place to dark-brown sandstone, whose perfectly horizontal strata rapidly rise above the head to prove the rate of descent along the apparently gentle decline. Overshadowed by this sandstone of chocolate hue the way grows gloomy and foreboding, and the gorge



Drawn by Thomas Moran.

A RESTING PLACE.

narrows greatly. The traveler stops a moment beneath a slanting cliff 500 feet high, where there is an Indian grave and pottery scattered about. A gigantic niche has been worn in the face of this cavernous cliff, which, in recognition of its fancied Egyptian character, was named the Temple of Set by the painter, Thomas Moran. A little beyond this temple it becomes necessary to abandon the animals. The river is still a mile and a half distant. The way narrows now to a mere notch, where two wagons could barely pass, and the granite begins to tower gloomily overhead, for we have dropped below the sandstone and have entered the archæan—a frowning black rock, streaked, veined and swirled with vivid red and white, smoothed and polished by the rivulet and beautiful as a mosaic. Obstacles are encountered in the form of steep interposing crags, past which the brook has found a way, but over which the pedestrian must clamber. After these lesser difficulties come sheer descents, which at present are passed by the aid of ropes. The last considerable drop is a forty-foot bit by the side of a pretty cascade, where there are just enough irregularities in the wall to give toe-hold. The narrowed cleft becomes exceedingly wayward in its course, turning abruptly to right and left, and working down into twilight depths. It is very still. At every turn one looks to see the embouchure upon the river, anticipating the sudden shock of the unintercepted roar of waters. When at last this is reached, over a final downward clamber, the traveler stands upon a sandy rift confronted by nearly vertical walls many hundred feet high, at whose base a black torrent pitches in a giddy upward slide that gives him momentarily the sensation of slipping into an abyss.

"With so little labor may one come to the Colorado River in the heart of its most tremendous channel, and gaze upon a sight that heretofore has had fewer witnesses than have the wilds of Africa. Dwarfed by such prodigious mountain shores, which rise immediately from the water at

an angle that would deny footing to a mountain sheep, it is not easy to estimate confidently the width and volume of the river. Choked by the stubborn granite at this point, its width is probably between two hundred and fifty and three hundred feet, its velocity fifteen miles an hour, and its volume and turmoil equal to the Whirlpool Rapids of Niagara. Its rise in time of heavy rain is rapid and appalling, for the walls shed almost instantly all the water that falls upon them. Drift is lodged in the crevices thirty feet overhead. For only a few hundred yards is the tortuous stream visible, but its effect upon the senses is perhaps the greater for that reason. Issuing as from a mountain side, it slides with oily smoothness for a space and suddenly breaks into violent waves that comb back against the current and shoot unexpectedly here and there, while the volume sways tide-like from side to side, and long curling breakers form and hold their outline lengthwise of the shore, despite the seemingly irresistible velocity of the water. The river is laden with drift, huge tree trunks, which it tosses like chips in its terrible play.

"Standing upon that shore one can barely credit Powell's achievement, in spite of its absolute authenticity. Never was a more magnificent self reliance displayed than by the man who not only undertook the passage of Colorado River but won his way. And after viewing a fraction of the scene at close range, one cannot hold it to the discredit of three of his companions that they abandoned the undertaking not far below this point. The fact that those who persisted got through alive is hardly more astonishing than that any should have had the hardihood to persist. For it could not have been alone the privation, the infinite toil, the unending suspense in constant menace of death that assaulted their courage; these they had looked for; it was rather the unlifted gloom of those tartarean depths, the unspeakable horrors of an endless valley of the shadow of death, in which every step was irrevocable.

"Returning to the spot where the animals were abandoned, camp is made for the night. Next morning the way is retraced. Not the most fervid pictures of a poet's fancy could transcend the glories then revealed in the depths of the Cañon; inky shadows, pale gildings of lofty spires, golden splendors of sun beating full on façades of red and yellow, obscurations of distant peaks by veils of transient shower, glimpses of white towers half drowned in purple haze, suffusions of rosy light blended in reflection from a hundred tinted walls. Caught up to exalted emotional heights the beholder becomes unmindful of fatigue. He mounts on wings. He drives the chariot of the sun."

VI.

HAVING returned to the plateau, it will be found that the descent into the Cañon has bestowed a sense of intimacy that almost amounts to a mental grasp of the scene. The imposing Temple of Sett will be recognized after close scrutiny in a just determinable penstroke of detail. A memorably gorgeous Olympian height that dominated everything for the space of a mile will be seen to be nothing more than the perpendicular front of the Red Wall limestone, topped up and away by retreating summits, hidden from below, that reduce it now to the unimportance of a mere girdle. The verdant, flowered expanse of notable ruggedness below the Rock Cabin will be discoverable in a small smooth patch of marly hue. The terrific deeps that part the walls of hundreds of castles and turrets of mountainous bulk will be apprehended mainly through the memory of upward looks from the bottom, while towers and obstructions and yawning fissures that were deemed events of the trail will be wholly indistinguishable, although they are known to lie somewhere flat beneath the eye. The comparative insignificance of what are termed grand sights in other parts of the world is now clearly revealed. Twenty Yosemitees might lie unperceived anywhere below. Niagara, that Mecca of marvel seekers, would not here possess the dignity of a trout stream. Your companion, standing at a short distance on the verge, is an insect to the eye.

Still such particulars cannot long hold the attention, for the panorama is the real over-mastering charm. It is never twice the same. Although you think you have spelt out every temple and peak and escarpment, as the angle of sunlight changes there begins a ghostly advance of colossal forms from the farther side, and what you had taken to be the ultimate



Drawn by Thomas Moran.

IN THE GRANITE, OLD HANCE TRAIL.

wall is seen to be made up of still other isolated sculptures, revealed now for the first time by silhouetting shadows. The scene incessantly changes, flushing and fading, advancing into crystalline clearness, retiring into slumberous haze. Should it chance to have rained heavily in the night, next morning the Cañon is completely filled with fog. As the sun mounts, the curtain of mist suddenly breaks into cloud fleeces, and while you gaze these fleeces rise and dissipate, leaving the Cañon bare. At once around the bases of the lowest cliffs white puffs begin to appear, creating a scene of unparalleled beauty as their dazzling cumuli swell and rise and their number multiplies, until once more they overflow the rim, and it is as if you stood upon some land's end looking down upon a formless void. Then quickly comes the complete dissipation, and again the marshalling in the depths, the upward advance, the total suffusion and the speedy vanishing, repeated over and over until the warm walls have expelled their saturation.

Long may the visitor loiter upon the rim, powerless to shake loose from the charm, tirelessly intent upon the silent transformations until the sun is low in the west. Then the Cañon sinks into mysterious purple shadow, the far Shinumo Altar is tipped with a golden ray, and against a leaden horizon the long line of the Echo Cliffs reflects a soft brilliance of indescribable beauty, a light that, elsewhere, surely never was on sea or land. Then darkness falls, and should there be a moon, the scene in part revives in silver light, a thousand spectral forms projected from inscrutable gloom; dreams of mountains, as in their sleep they brood on things eternal.



Drawn by H. F. Farny.

ON THE TRAIL.



Drawn by F. H. Lungren.

AN EVENING AT THE CANON CAMP.



THE COLORADO RIVER.

Drawn by Thomas Moran.

CLIFF DWELLINGS.

At several points upon the rim of the Grand Cañon, both east and west of the stage terminus, the razed walls of ancient stone dwellings may be seen. They are situated upon the verge of the precipice, in one instance crowning an outstanding tower that is connected with the main wall by only a narrow saddle, and protected on every other hand by the perpendicular depths of the Cañon. The world does not contain another fortress so triumphantly invulnerable to primitive warfare, nor a dwelling-place that can equal it in sublimity. It will be found upon one of the salients of Point Moran.



CLIFF DWELLING—POINT MORAN.

Scattered southward over the plateau, other ruins of similar character have been found. Perfect specimens of pottery and other domestic utensils have been exhumed in small number, and the rich and varied archaeological collections that have so recently rewarded systematic examination of prehistoric ruins in other parts of the country, whose treasures were thought to have been exhausted, would seem to warrant careful search of this region, where the known ruins have been but superficially examined, and doubtless many more await discovery.

The most famous group, and the largest aggregation, is found in Walnut Cañon, eight miles southeast from Flagstaff. This cañon is several hundred feet deep and some three miles long, with steep terraced walls of limestone. Along the shelving terraces, under beetling projections of the strata, are scores of these quaint abodes. The larger are divided into four or five compartments by cemented walls, many parts of which are still intact. It is believed that these ancient people customarily dwelt upon the plateau above, retiring to their fortifications when attacked by an enemy.

CAVE DWELLINGS.

Nine miles from Flagstaff, and only half a mile from the stage road to the Grand Cañon, these remarkable ruins are to be seen, upon the summit and farther side of an extinct crater whose slopes are buried deep in black and red gravel-like cinder. The Caves, so-called, were the vent holes of the volcano in the time of the eruptions of lava and ashes that have so plentifully covered the region for many miles about—countless ragged caverns opening directly under foot and leading by murky windings to unknown depths in the earth's crust. Many are simple pot-holes a few yards in depth, their subterranean leads choked up and concealed. Others yawn black, like burrows of huge beasts of prey. In many instances they are surrounded by loose stone walls, parts of which are standing just as when their singular inhabitants peered through their crevices at an approaching foe. Broken pottery abounds, scattered in small fragments like a talus to the very foot of the hill. The character of the pottery is similar to that found in the Cliff Dwellings, and it is probable that the Cave Dwellers and the Cliff Dwellers were the same people. The coarser vessels are simply glazed, or roughly corrugated; the smaller ones are decorated by regular indentations, in imitation of the scales of the rattlesnake, or painted in black and white geometrical designs.

Inferentially, these mysterious people, like the Cliff Dwellers, were of the same stock as the Pueblo Indians of our day. How long ago they dwelt here cannot be surmised, save roughly from the appearance of extreme age that characterizes many of the ruins, and the absence of native traditions concerning them. Their age has been estimated at from six to eight hundred years.



CAVE DWELLING, NEAR FLAGSTAFF.



CLIFF DWELLINGS, WALNUT CANON.

Drawn by Thomas Moran.

SAN FRANCISCO PEAKS.

These magnificent peaks, visible from every part of the country within a radius of a hundred miles, lie just north of Flagstaff. They are four in number, but form one mountain. From Flagstaff a road has been constructed to one of the peaks, Mt. Humphrey, whose summit is 12,750 feet above sea-level. It is a good mountain road, and the entire distance from Flagstaff is only about ten miles. The trip to the summit and back is easily made in one day.

Mr. A. Doyle, of Flagstaff, is the owner of the trail to Humphrey's Peak, and acts as guide when desired. He provides the necessary equipment, including his own services, at a reasonable cost. Independent arrangements may be made if desired, but in that case toll is charged for use of the trail.

The summit of Mt. Humphrey affords one of the noblest of mountain views, the panorama including the north wall of the Grand Cañon, the Painted Desert, the Moqui villages, the Superstition Mountains near Phoenix, many lakes, and far glimpses over a wide circle.

COST OF A TRIP TO THE GRAND CANON, STAGE SCHEDULE, HOTELS, ETC.

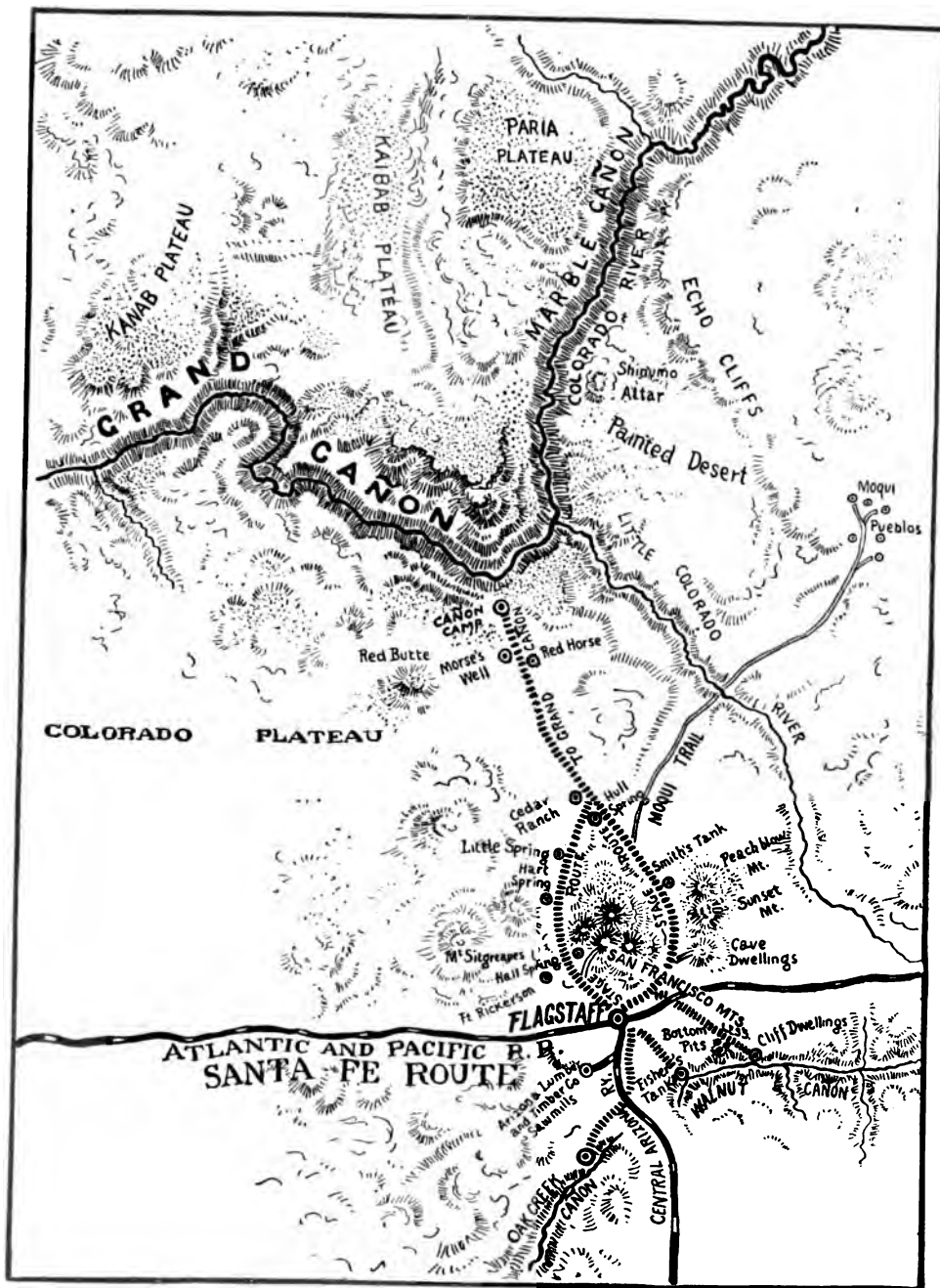
The stage fare from Flagstaff to the Grand Cañon and return is \$15.00. Stage tickets may be purchased on arrival at Flagstaff, or special railroad tickets, bearing stage coupons, may be obtained by the tourist.

The stage leaves Flagstaff for the Grand Cañon after breakfast every Monday, Wednesday and Friday morning, except during the winter months, returning Tuesday, Thursday and Saturday mornings. The office of J. W. Thurbur, manager of the Grand Cañon Stage Line Company, is conveniently situated on the depot platform, and visitors will find it to their advantage to apply to him immediately upon arrival and secure stage accommodations.

The cost to Grand Cañon visitors of hotel accommodations, at Flagstaff, the Cañon and the midway lunch station at Cedar Ranch, is about \$3.00 per day.

Camping outfits, pack animals, saddle horses, guides, rough clothing, stout shoes and general supplies can be procured at the Cañon camp by parties who desire to descend the trails or make excursions along the rim.

There are several hotels in Flagstaff, and visitors who chance to arrive in town between the regular stage runs, as scheduled above, will have no difficulty in spending time agreeably in the interim. In addition to the San Francisco Peaks and the Cliff and Cave Dwellings, Fisher's Tanks may be reached by a short and agreeable drive, and fifteen miles to the south, in Oak Creek Cañon, there is really excellent trout fishing.



Flagstaff is situated on the Atlantic and Pacific Railroad, a division of the through California line of the Santa Fe Route.

Special tickets to the Grand Cañon, containing stage coupon, are sold at reduced rates by agents of the Santa Fe Route, and by agents of connecting lines, in the principal cities of the United States.

Inquiries as to cost of tickets, time of trains, etc., may be addressed to any agent of the Santa Fe Route, or to the undersigned, as may be most convenient.

W. J. BLACK,
General Passenger Agent, A. T. & S. F. R'y,
TOPEKA, KAN.

J. J. BYRNE,
General Passenger Agent, So. Cal. R'y,
LOS ANGELES.

DON A. SWEET,
General Passenger Agent, A. & P. R. R.,
ALBUQUERQUE, N. M.

C. A. HIGGINS,
Asst. General Passenger Agent, A. T. & S. F. R'y,
CHICAGO.

W. S. KEENAN,
General Passenger Agent, G. C. & S. F. R'y,
GALVESTON, TEX.

H. C. BUSH,
Asst. General Passenger Agent, A. & P. R. R.,
SAN FRANCISCO.

